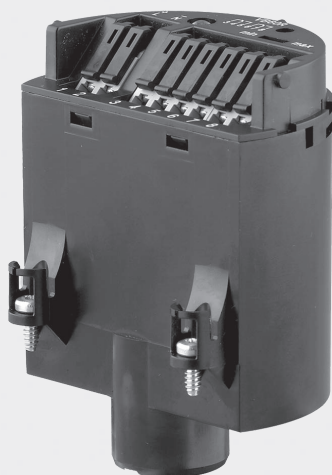


# Vibrating Switches

## Electronics module

Sitrans LVL200

Operating Instructions • 06/2016



SITRANS

**SIEMENS**

**Safety Guidelines:** Warning notices must be observed to ensure personal safety as well as that of others, and to protect the product and the connected equipment. These warning notices are accompanied by a clarification of the level of caution to be observed.

**Qualified Personnel:** This device/system may only be set up and operated in conjunction with this manual. Qualified personnel are only authorized to install and operate this equipment in accordance with established safety practices and standards.

**Unit Repair and Excluded Liability:**

- The user is responsible for all changes and repairs made to the device by the user or the user's agent.
- All new components are to be provided by Siemens.
- Restrict repair to faulty components only.
- Do not reuse faulty components.

**Warning:** Cardboard shipping package provides limited humidity and moisture protection. This product can only function properly and safely if it is correctly transported, stored, installed, set up, operated, and maintained.

This product is intended for use in industrial areas. Operation of this equipment in a residential area may cause interference to several frequency based communications.

**Note:** Always use product in accordance with specifications.

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- For a selection of Siemens level measurement manuals, go to: **[www.siemens.com/processautomation](http://www.siemens.com/processautomation)**. Under Process Instrumentation, select *Level Measurement* and then go to the manual archive listed under the product family.
- For a selection of Siemens weighing manuals, go to: **[www.siemens.com/processautomation](http://www.siemens.com/processautomation)**. Under Weighing Technology, select *Continuous Weighing Systems* and then go to the manual archive listed under the product family.

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# 1 About this document

## 1.1 Function

This operating instructions manual provides all the information you need for mounting, connection and setup as well as important instructions for maintenance and fault rectification. Please read this information before putting the instrument into operation and keep this manual accessible in the immediate vicinity of the device.

## 1.2 Target group

This operating instructions manual is directed to trained specialist personnel. The contents of this manual should be made available to these personnel and put into practice by them.

## 1.3 Symbols used



### Information, tip, note

This symbol indicates helpful additional information.



**Caution:** If this warning is ignored, faults or malfunctions can result.



**Warning:** If this warning is ignored, injury to persons and/or serious damage to the instrument can result.



**Danger:** If this warning is ignored, serious injury to persons and/or destruction of the instrument can result.



### Ex applications

This symbol indicates special instructions for Ex applications.



### SIL applications

This symbol indicates instructions for functional safety which must be taken into account particularly for safety-relevant applications.

- **List**

The dot set in front indicates a list with no implied sequence.

- **Action**

This arrow indicates a single action.

- 1 **Sequence of actions**

Numbers set in front indicate successive steps in a procedure.



### Battery disposal

This symbol indicates special information about the disposal of batteries and accumulators.

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## **2 For your safety**

### **2.1 Authorised personnel**

All operations described in this operating instructions manual must be carried out only by trained specialist personnel authorised by the plant operator.

During work on and with the device the required personal protective equipment must always be worn.

### **2.2 Appropriate use**

The electronics module is a replacement module for Sitrans LVL200 vibrating level switches.

### **2.3 Safety instructions for Ex areas**

Please note the Ex-specific safety information for installation and operation in Ex areas. These safety instructions are part of the operating instructions manual and come with the Ex-approved instruments.

---

## 3 Product description

### 3.1 Configuration

#### Scope of delivery

The scope of delivery encompasses:

- Electronics module for SITRANS LVL200
- Documentation
  - This operating instructions manual

### 3.2 Principle of operation

#### Area of application

The electronics module is suitable for replacement in SITRANS LVL200 vibrating level switches.

### 3.3 Packaging, transport and storage

#### Packaging

Your instrument was protected by packaging during transport. Its capacity to handle normal loads during transport is assured by a test based on ISO 4180.

The packaging of standard instruments consists of environment-friendly, recyclable cardboard. For special versions, PE foam or PE foil is also used. Dispose of the packaging material via specialised recycling companies.

#### Transport

Transport must be carried out in due consideration of the notes on the transport packaging. Nonobservance of these instructions can cause damage to the device.

#### Transport inspection

The delivery must be checked for completeness and possible transit damage immediately at receipt. Ascertained transit damage or concealed defects must be appropriately dealt with.

#### Storage

Up to the time of installation, the packages must be left closed and stored according to the orientation and storage markings on the outside.

Unless otherwise indicated, the packages must be stored only under the following conditions:

- Not in the open
- Dry and dust free
- Not exposed to corrosive media
- Protected against solar radiation
- Avoiding mechanical shock and vibration

#### Storage and transport temperature

- Storage and transport temperature see chapter "*Supplement - Technical data - Ambient conditions*"
- Relative humidity 20 ... 85 %

## 4 Mounting

### 4.1 Mounting instructions

If the electronics module is defective, it can be replaced by the user.



In Ex applications, only instruments and electronics modules with appropriate Ex approval may be used.

### 4.2 Mounting preparations

In general, the electronics module can be also exchanged within the type series against an electronics with another signal output (e.g. relay against transistor output).

If you want to use an electronics module with a different signal output, you can download the corresponding operating instructions manual from our homepage under Downloads.

### 4.3 Installation procedure

#### Installation procedure

To exchange the electronics module, proceed as follows:

1. Switch off power supply
2. Unscrew the housing lid
3. Lift the opening levers of the terminals with a screwdriver
4. Pull the connection cables out of the terminals
5. Loosen the two screws with a screw driver (Torx size T10 or slot 4)

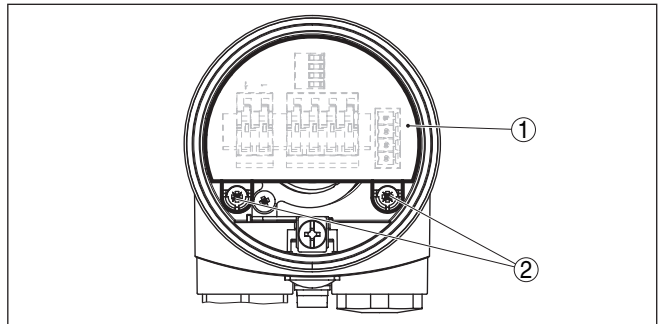


Fig. 1: Loosen the holding screws

- 1 Electronics module
- 2 Screws (2 pcs.)

6. Pull out the old electronics module
7. Compare the new electronics module with the old one. The type label of the electronics module must correspond to that of the old electronics module. This applies particularly to instruments used in hazardous areas.
8. Compare the settings of the two electronics modules. Set the adjustment elements of the new electronics module to the same setting of the old one.

**Information:**

Make sure that the housing is not rotated during the electronics exchange. Otherwise the plug may be in a different position later.

9. Insert the electronics module carefully. Make sure that the plug is in the correct position.
10. Screw in the two holding screws and tighten them
11. Insert the wire ends into the open terminals according to the wiring plan
12. Press down the opening levers of the terminals, you will hear the terminal spring closing
13. Check the hold of the wires in the terminals by lightly pulling on them
14. Check cable gland on tightness. The seal ring must completely encircle the cable.
15. Screw the housing lid back on

The electronics exchange is now finished.



As a rule, an exchange of electronics must be documented internally if Ex applications are involved.



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## 5 Setup

### Setup

### 5.1 Setup

When replacing the electronics module, make sure that all adjustment elements are set to the settings of the old electronics module. Hence the sensor is immediately ready for operation.

In general, the electronics module can be also exchanged within the type series against an electronics with another signal output (e.g. relay against transistor output).

If you want to use an electronics module with a completely different signal output, you have to carry out the complete setup.

The necessary, suitable operating instructions manual can be downloaded from our homepage under Downloads.

The adjustment should be carried out according to the description in the operating instructions manual.

---

## 6 Maintenance

### 6.1 Instrument repair

If it is necessary to repair the instrument, please contact Siemens Milltronics Process Instruments Inc. You find the locations on our homepage "[www.siemens.com/processautomation](http://www.siemens.com/processautomation)".

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## 7 Dismount

### 7.1 Dismounting steps

Take note of chapters "*Mounting*" and "*Connecting to power supply*" and carry out the listed steps in reverse order.

### 7.2 Disposal

The replacement module consists of materials which can be recycled by specialised recycling companies. We have purposely designed the electronic modules to be easily separable.

#### **WEEE directive 2002/96/EG**

This instrument is not subject to the WEEE directive 2002/96/EG and the respective national laws (in Germany e.g. ElektroG). Pass the instrument directly on to a specialised recycling company and do not use the municipal collecting points. These may be used only for privately used products according to the WEEE directive.

Correct disposal avoids negative effects on humans and the environment and ensures recycling of useful raw materials.

Materials: see chapter "*Technical data*"

If you have no way to dispose of the replacement module properly, please contact us concerning return and disposal.

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## 8 Supplement

### 8.1 Technical data

#### Technical data

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are stated in the operating instructions manual of the respective sensor.

# Notes

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# Notes

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# Notes

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## For more information

[www.siemens.com/level](http://www.siemens.com/level)

[www.siemens.com/weighing](http://www.siemens.com/weighing)



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